

IN THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A fixing apparatus comprising:

- a magnetic flux generation section that generates magnetic flux;
- a heat-producing element ~~made~~ of a nonmagnetic electrical conductor, that allows passage of the magnetic flux and is induction-heated;
- at least one magnetism masking element that masks the magnetic flux; and
- a magnetic flux adjustment section that switches between masking and clearing of magnetic flux with respect to a paper non-passage area of said heat-producing element,

wherein said magnetism masking element is located on the opposite side of said magnetic flux generation section across the heat-producing element, and, from said magnetic flux generation section when said heat-producing element produces heat, said magnetism masking element is positioned, by said magnetic flux adjustment section, at a position where the magnetic flux is masked with respect to a paper non-passage area of said heat-producing element and suppresses heat in the paper non-passage area.

2. (Currently Amended) The fixing apparatus according to claim 1 further, comprising an opposed core located on the opposite side of said magnetic flux generation section across the heat-producing element ~~from said magnetic flux generation section~~,

wherein said magnetism masking element moves relative to said magnetic flux generation section in a direction of movement of said heat-producing element, and is

displaced between a magnetic path blocking position at which a magnetic path corresponding to a paper non-passage area of said heat-producing element between said magnetic flux generation section and the opposed core is blocked, and a magnetic path clearing position at which the magnetic path is cleared.

3. (Currently Amended) The fixing apparatus according to claim 1, wherein:

said heat-producing element is formed in a circular shape; and

said magnetism masking element is located inside the circle formed by said heat-producing element; and

said magnetic flux generation section is located outside ~~said heat-producing element~~ the circle.

4. (Currently Amended) The fixing apparatus according to claim 1, wherein:

said magnetic flux generation section comprises:

an exciting coil that ~~is wound and placed~~ comprises windings; and

a center core located in a center of windings of the exciting coil; and

a width of said magnetism masking element in a direction of movement relative to said magnetic flux generation section is greater than a width of the center core in the same direction.

5. (Original) The fixing apparatus according to claim 4, wherein the width of said magnetism masking element in a direction of movement relative to the magnetic flux generation section is narrower than a winding width of a winding section of the exciting

coil in the same direction.

6. (Original) The fixing apparatus according to claim 5, wherein at least one magnetic path clearing position of said magnetism masking element is a position at which said magnetism masking element is opposite the winding section of the exciting coil.

7. (Original) The fixing apparatus according to claim 4, wherein a magnetic path blocking position at which a magnetic path of a paper non-passage area of said heat-producing element is blocked by said magnetism masking element is a position at which said magnetism masking element is opposite the center of the windings of the exciting coil.

8. (Currently Amended) The fixing apparatus according to claim 1, wherein:

said magnetic flux generation section comprises an exciting coil that ~~is wound and placed~~ comprises windings; and

a width of said magnetism masking element in a direction of movement relative to said magnetic flux generation section is greater than a width of a center of windings of the exciting coil in the same direction.

9. (Original) The fixing apparatus according to claim 8, wherein the width of said magnetism masking element in a direction of movement relative to said magnetic flux generation section is narrower than a winding width of a winding section of the exciting coil in the same direction.

10. (Original) The fixing apparatus according to claim 9, wherein at least one magnetic path clearing position of said magnetism masking element is a position at which said magnetism masking element is opposite the winding section of the exciting coil.

11. (Original) The fixing apparatus according to claim 8, wherein a magnetic path blocking position at which a magnetic path of a paper non-passage area of said heat-producing element is blocked by said magnetism masking element is a position at which said magnetism masking element is opposite the center of the windings of the exciting coil.

12. (Original) The fixing apparatus according to claim 1, comprising a plurality of said magnetism masking elements having lengths corresponding to each of a plurality of paper non-passage areas of mutually different widths of said heat-producing element.

13. (Original) The fixing apparatus according to claim 12, wherein:
the plurality of said magnetism masking element are provided on a rotating element that rotates freely relative to said magnetic flux generation section; and
an angle forming a normal line passing through centers of two mutually adjacent magnetism masking elements is set to an angle of either 30 degrees<03<60 degrees or 120 degrees<04<180 degrees.

14. (Original) The fixing apparatus according to claim 1, further comprising an

opposed core located opposite said magnetic flux generation section,

wherein said magnetism masking element is provided on the opposed core that is rotatable relative to said magnetic flux generation section.

15. (Original) The fixing apparatus according to claim 2, wherein said magnetism masking element is formed by a cutaway part provided in the opposed core.

16. (Currently Amended) The fixing apparatus according to claim 2, wherein said magnetism masking element ~~is formed by~~ comprises a recess provided in the opposed core.

17. (Original) The fixing apparatus according to claim 15, wherein an electrical conductor is embedded in the cutaway part.

18. (Currently Amended) The fixing apparatus according to claim 17, wherein the electrical conductor ~~forms a same plane~~ is coplanar with a surface of the opposed core.

19. (Currently Amended) The fixing apparatus according to claim ~~13~~ 16, wherein an electrical conductor is embedded in the recess.

20. (Original) The fixing apparatus according to claim 19, wherein the electrical conductor is formed flush with a surface of the opposed core.

21. (Currently Amended) The fixing apparatus according to claim 1 ~~12~~, wherein the plurality of said magnetism masking elements have lengths corresponding to each of A3 size width, A4 size width, and B4 size width paper non-passage areas of said heat-producing element.

22. (Currently Amended) The fixing apparatus according to claim 1 further, comprising a paper passage area magnetism masking element having a length corresponding to a paper passage area width smaller than a width of a maximum paper passage area of said heat-producing element,

wherein the paper passage area magnetism masking element is placed in a position corresponding to a paper passage area of said heat-producing element.

23. (Currently Amended) The fixing apparatus according to claim 1, wherein:

said heat-producing element is configured ~~with~~ as an endless belt; and

a belt supporting member on which the endless belt is supported comprises ~~suspended is configured with~~ a member that allows passage of magnetic flux.

24. (Currently Amended) The fixing apparatus according to claim 23, wherein the belt supporting member ~~is made~~ comprise of a metallic material with a thickness in a range of 0.04 mm to 0.2 mm in a ~~vertical~~ direction ~~with respect~~ perpendicular to a peripheral surface of the endless belt.

25. (Original) The fixing apparatus according to claim 23, wherein the belt

supporting member has a specific resistance of 50 $\mu\Omega\text{cm}$ or more.

26. (Currently Amended) The fixing apparatus according to claim 23, wherein the belt supporting member ~~is made of~~ comprises a nonmagnetic stainless material.

27. (Currently Amended) The fixing apparatus according to claim 23, wherein the belt supporting member comprises a rotatable supporting roller ~~in which a sheet is~~ comprising a sheet formed into a cylindrical shape and ~~a joint is~~ joint welded.

28. (Currently Amended) The fixing apparatus according to claim 23, wherein the belt supporting member comprises a rotatable supporting roller in which rib-shaped reinforcing grooves are ~~formed~~ provided in a direction of a generating line of a cylinder.

29. (Original) The fixing apparatus according to claim 23, wherein a circumference of the endless belt is a non-integral multiple of an outer circumference of the supporting roller.

30. (Original) The fixing apparatus according to claim 23, wherein the belt supporting member comprises a rotatable supporting roller in which knurl-shaped projections and depressions are formed on an outer surface of a cylinder.

31. (Currently Amended) The fixing apparatus according to claim 30, wherein:
the projections and depressions ~~are formed with~~ have a predetermined pitch in a

circumferential direction of the supporting roller; and

a circumference of the endless belt is a non-integral multiple of a pitch of the projections and depressions.

32. (Currently Amended) The fixing apparatus according to claim 23, wherein the belt supporting member ~~is formed with~~ comprises a supporting roller in which a plurality of channel-shaped sheets are combined into a cylindrical shape.

33. (Currently Amended) The fixing apparatus according to claim 23, wherein the belt supporting member ~~is formed~~ comprises ~~with~~ a guide member in which a sheet is formed into an arc shape.

34. (Original) An image forming apparatus comprising the fixing apparatus according to claim 1.

35. (Currently Amended) The fixing apparatus according to claim 1, wherein said heat-producing element ~~is made of~~ comprises a thin copper material.

36. (Currently Amended) The fixing apparatus according to claim 1, wherein said magnetism masking element ~~is made of~~ comprises an electrical conductor.

37. (Currently Amended) The fixing apparatus according to claim 1, wherein said magnetism masking element ~~is made of~~ comprises a copper material.

38. (Currently Amended) The fixing apparatus according to claim 1, wherein said magnetism masking element ~~is made of~~ comprises an aluminum material.